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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/897,898	07/05/2001	Harm M. Deckers	034547-0104	3117
22428	7590	05/13/2004	EXAMINER	
<b>FOLEY AND LARDNER</b> SUITE 500 3000 K STREET NW WASHINGTON, DC 20007				PAK, YONG D
		ART UNIT		PAPER NUMBER
		1652		

DATE MAILED: 05/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	09/897,898	DECKERS ET AL.	
	Examiner Yong D Pak	Art Unit 1652	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 24 December 2003.
- 2a) This action is FINAL.      2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 14-18 and 29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 14-18 and 29 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    - a) All    b) Some \* c) None of:
      1. Certified copies of the priority documents have been received.
      2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
      3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |                                                                                                                                             |                                                                             |
|---------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                                                                            | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                                        | Paper No(s)/Mail Date. _____.                                               |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>2/6/04</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|                                                                                                                                             | 6) <input type="checkbox"/> Other: _____.                                   |

## **DETAILED ACTION**

Claims 14-18 and 29 are pending.

### ***Priority***

As previously stated, Applicant has not complied with one or more conditions for receiving the benefit of an earlier filing date under 35 U.S.C. 120 as follows:

The second application must be an application for a patent for an invention which is also disclosed in the first application (the parent or provisional application); the disclosure of the invention in the parent application and in the second application must be sufficient to comply with the requirements of the first paragraph of 35 U.S.C. 112. See *Transco Products, Inc. v. Performance Contracting, Inc.*, 38 F.3d 551, 32 USPQ 2d 1077 (Fed. Cir. 1994).

The parent application, 09/577,147, does not disclose a method of preparing an emulsion formulation comprising a thioredoxin or thioredoxin reductase, which is claimed in the instant application.

### ***Information Disclosure Statement***

The information disclosure statement (IDS) submitted on February 6, 2004 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

***Response to Arguments***

Applicant's arguments filed on December 24, 2003 have been fully considered but they are not persuasive.

***Claim Rejections - 35 USC § 103***

Claims 14-15, 18 and 29 remain rejected under 35 U.S.C. 103(a) as being unpatentable over McCoy et al. in view of Loer et al.

Applicants argue that McCoy only teaches fusion proteins comprising a thioredoxin to increase production, activity, stability and/or solubility of heterologous proteins and does not provide any motivation to make an emulsion formulation comprising a thioredoxin. Applicants also argue that Loer does not disclose or suggest preparation of a thioredoxin containing emulsions.

The examiner disagrees. The motivation of combining the teachings of McCoy and Loer is to increase production, activity, stability and/or solubility of an oil body protein by making a fusion protein comprising said oil body protein and a thioredoxin. Preparing an emulsion of this fusion protein would have been an obvious step because it is well known in the art that oil body proteins are prepared by emulsifying the protein. Therefore, it would have been obvious to one having ordinary skill in the art to make a fusion protein comprising a thioredoxin and an oil body protein and then to make an emulsion comprising the fusion protein. One of ordinary skill in the art would have had a

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reasonable expectation of success since fusion proteins are made routinely in the art and preparation of oil bodies by forming emulsions are also practiced routinely in the art.

Claims 16-17 remain rejected under 35 U.S.C. 103(a) as being unpatentable over McCoy et al. in view of Loer et al. as applied to claims 14-15, 18 and 29 above, and further in view of Hildebrand et al.

The references of McCoy et al. and Loer et al. in combination teach a method of making a fusion protein comprising a thioreodixn and an oil body and emulsifying the product, as discussed above.

Hildebrand et al. (EP 0 550 162 A1 – form PTO-892) teach a method of expressing heterologous proteins in safflower cells (page 4).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the claimed invention was made to express the fusion protein in safflower cells. The motivation of expressing the fusion protein in safflower cells is to express the oil body protein in an oil-bearing crop. One of ordinary skill in the art would have had a reasonable expectation of success since expression of fusion proteins in plant cells such as safflower cells are performed routinely in the art.

No claims are allowed.

***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yong Pak whose telephone number is 571-272-0935. The examiner can normally be reached 6:30 A.M. to 5:00 P.M. Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ponnathapu Achutamurthy can be reached on 571-272-0928. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9306 for regular communications and 703-872-9307 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-1600.

Yong D. Pak  
Patent Examiner



PONNATHAPU ACHUTAMURTHY  
SUPERVISORY PATENT EXAMINER  
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